Graphics Verification
April Results

Measures Used

2 x 2 Contingency Table

Observations \ Forecasts			
	A	B	C = A +B
	D	E	F = D + E
	G = A + D	H = B + E	I = C + F

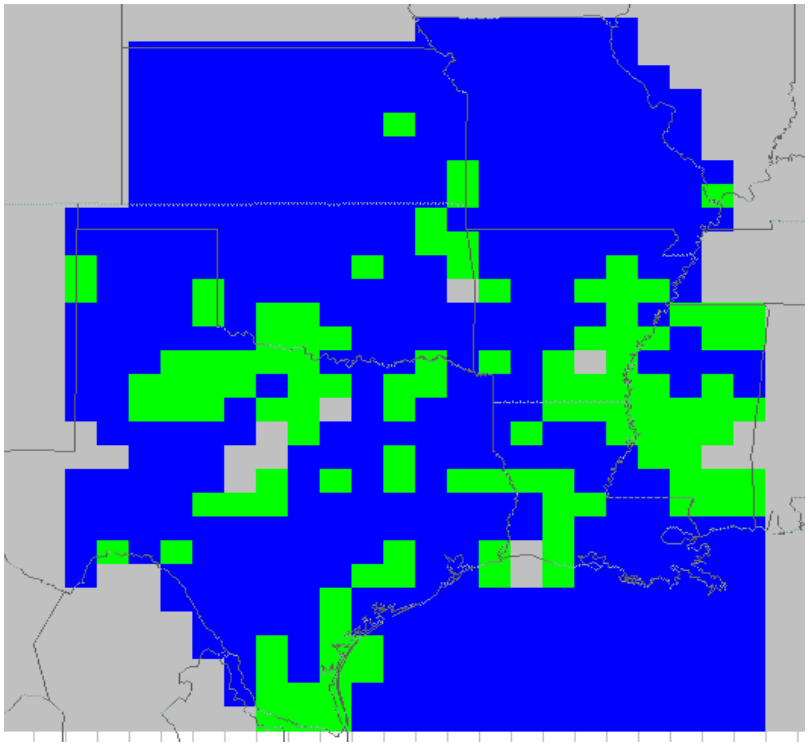
- **Chi-Square** – used to test for statistical significance. Answers the question, “Do we have a large enough sample to know our results are conclusive?”.
- **Heidke Skill Score** – used to test whether we are beating persistence or climatology.
- **Bias** – used to determine whether we are over-forecasting or under-forecasting.

HWD Results

Period: 01-30 Apr 03

HWD 12 Hr Forecast

HEIDKE SKILL SCORE



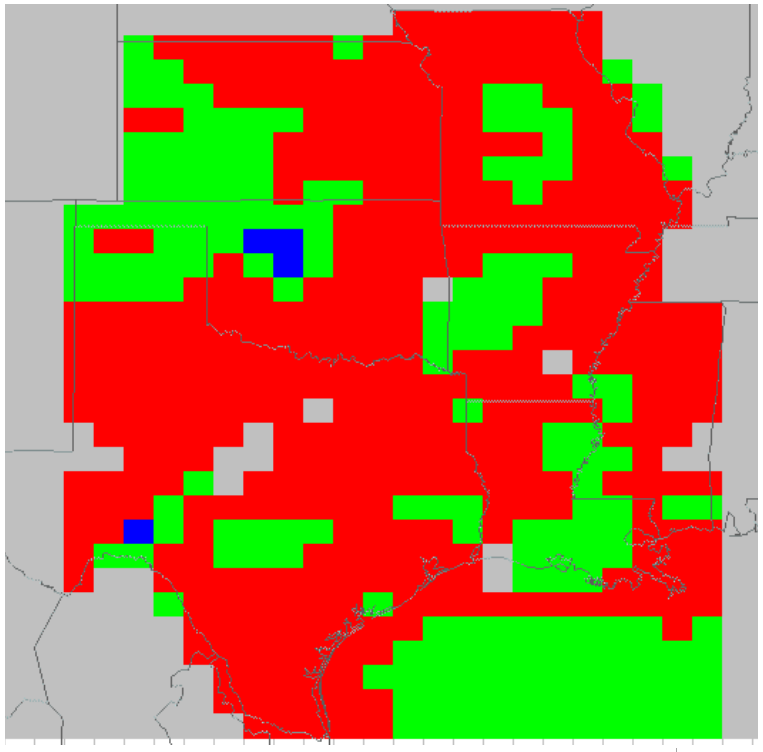
Strong Skill (hss>.5)

Weak to Moderate Skill (0<hss<.5)

No Skill (hss< 0)

Insufficient Data

BIAS



Over-Forecast (bias>1.2)

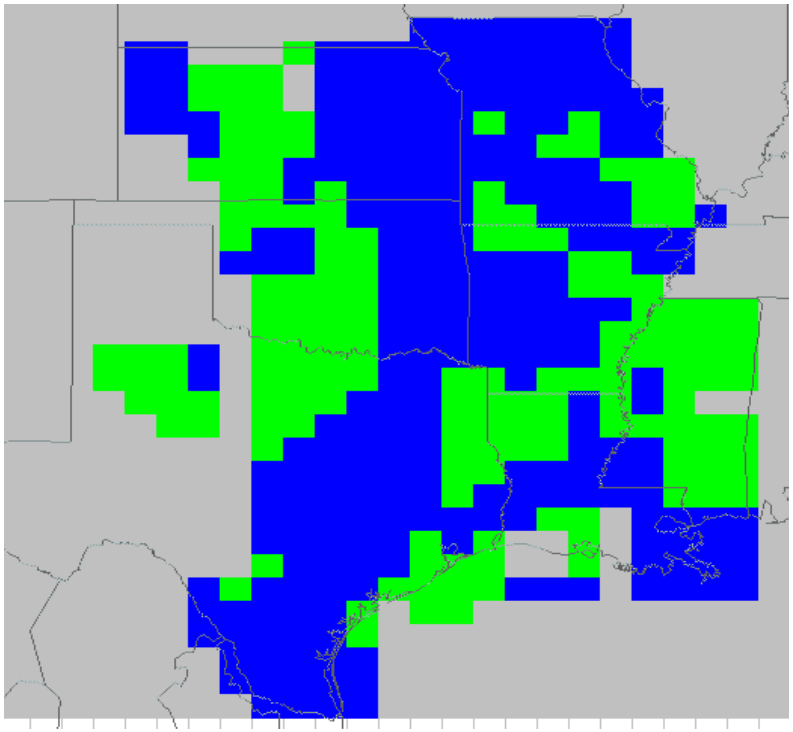
No Significant Bias (.8<bias<1.2)

Under-Forecast (bias< .8)

Insufficient Data

HWD 24 Hr Forecast

HEIDKE SKILL SCORE



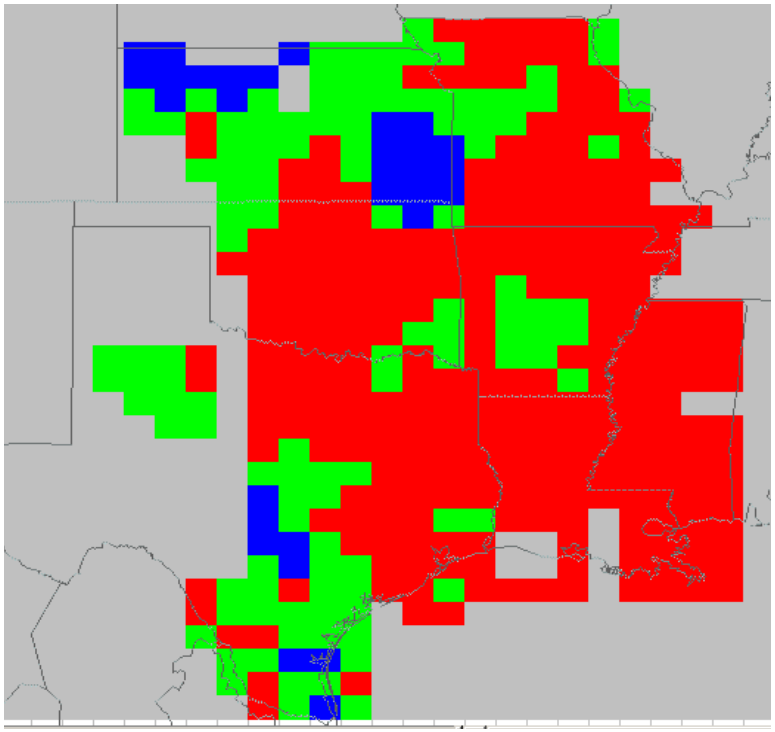
Strong Skill (hss>.5)

Weak to Moderate Skill (0<hss<.5)

No Skill (hss< 0)

Insufficient Data

BIAS



Over-Forecast (bias>1.2)

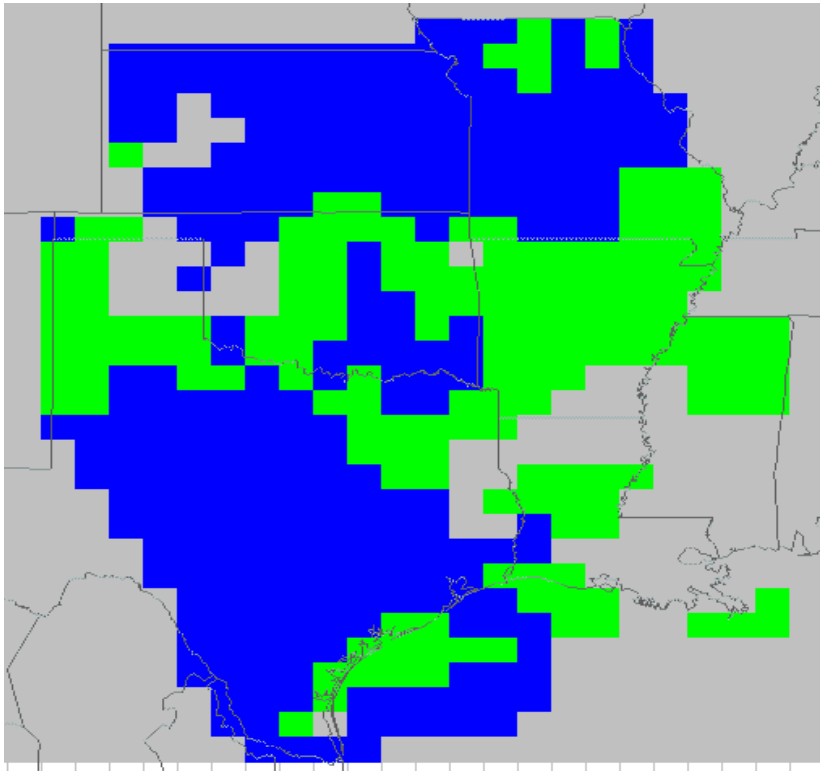
No Significant Bias (.8<bias<1.2)

Under-Forecast (bias< .8)

Insufficient Data

HWD 48 Hr Forecast

HEIDKE SKILL SCORE



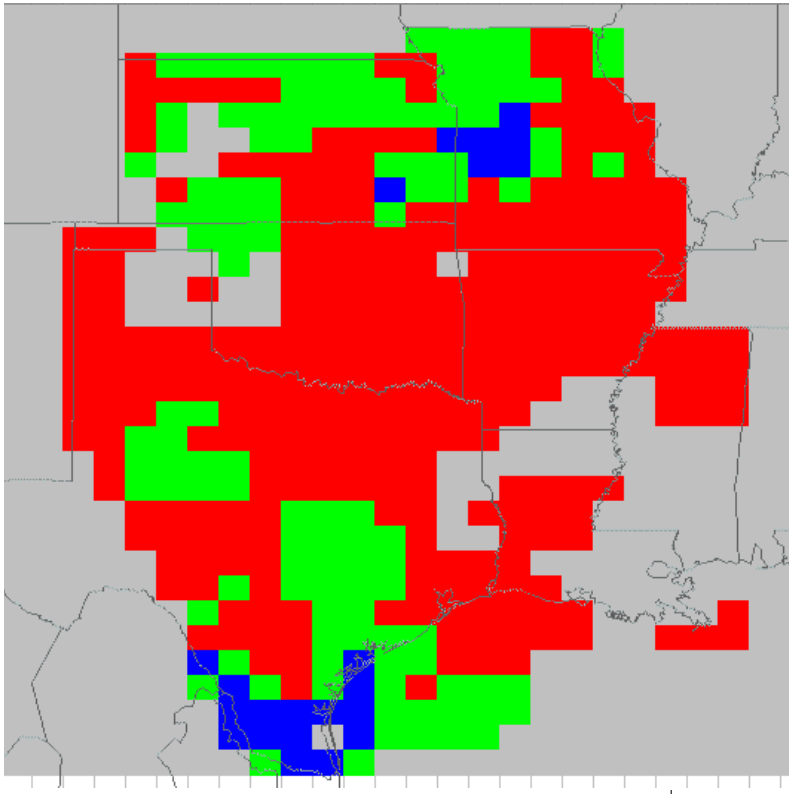
Strong Skill (hss>.5)

Weak to Moderate Skill (0<hss<.5)

No Skill (hss< 0)

Insufficient Data

BIAS



Over-Forecast (bias>1.2)

No Significant Bias (.8<bias<1.2)

Under-Forecast (bias< .8)

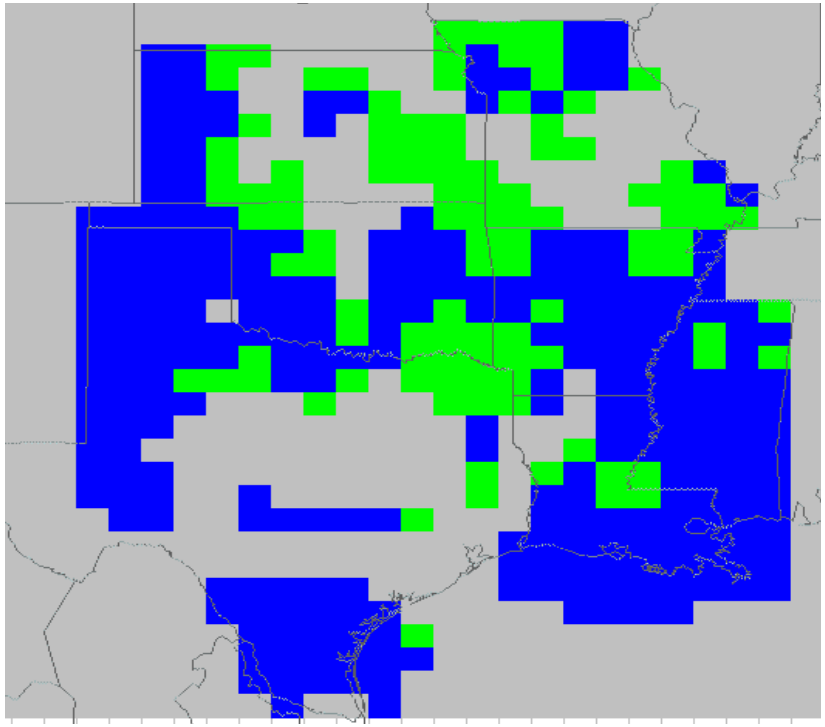
Insufficient Data

Thunderstorm Results

Period: 01-30 Apr 03

TSTMS 12 Hr Forecast

HEIDKE SKILL SCORE



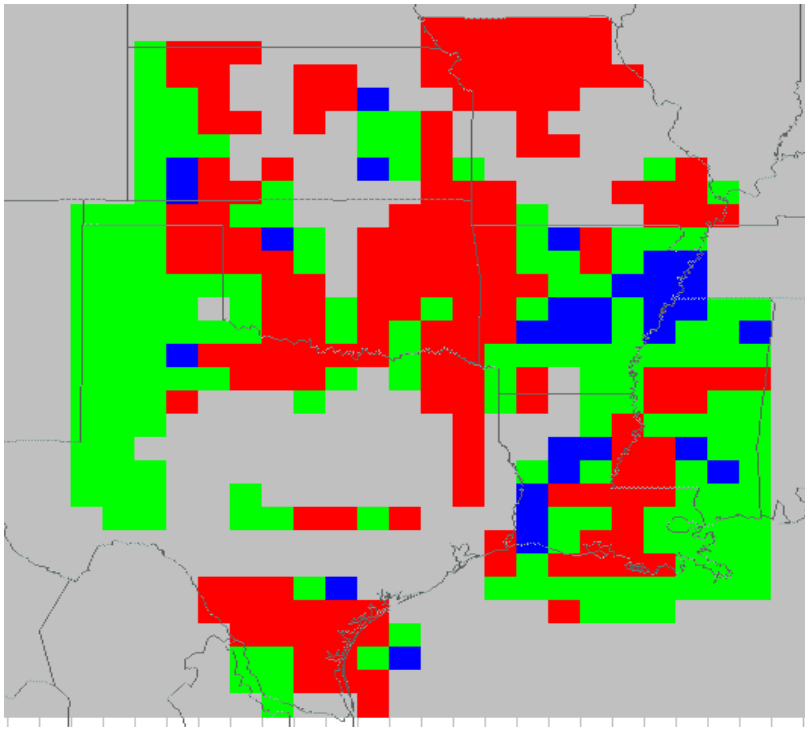
Strong Skill (hss>.5)

Weak to Moderate Skill (0<hss<.5)

No Skill (hss< 0)

Insufficient Data

BIAS



Over-Forecast (bias>1.2)

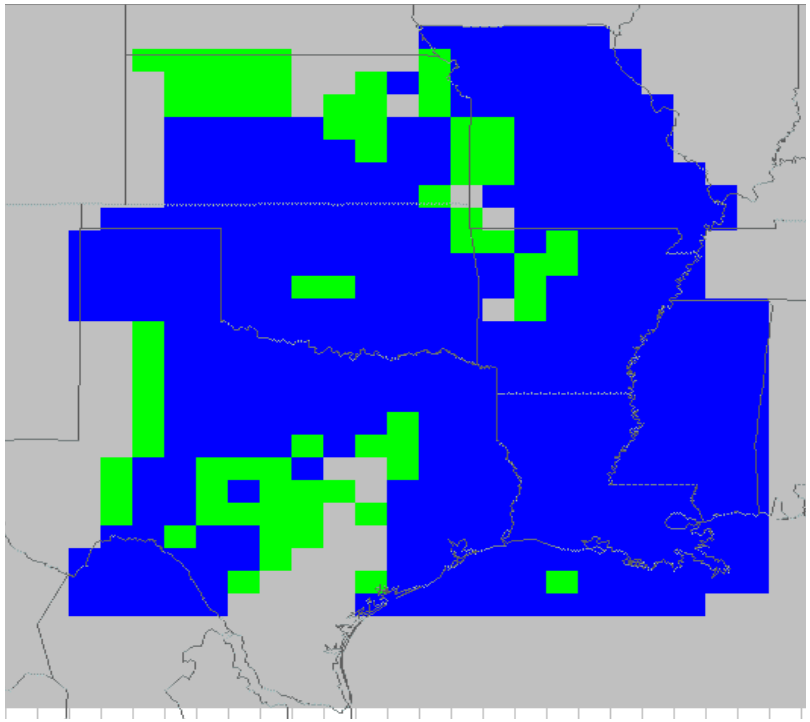
No Significant Bias (.8<bias<1.2)

Under-Forecast (bias< .8)

Insufficient Data

TSTMS 24 Hr Forecast

HEIDKE SKILL SCORE



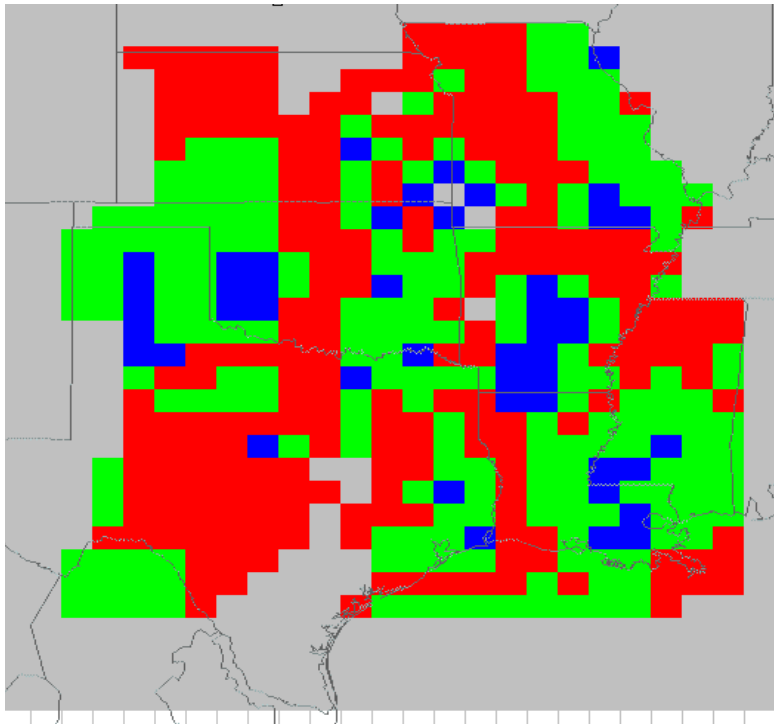
Strong Skill (hss>.5)

Weak to Moderate Skill (0<hss<.5)

No Skill (hss< 0)

Insufficient Data

BIAS



Over-Forecast (bias>1.2)

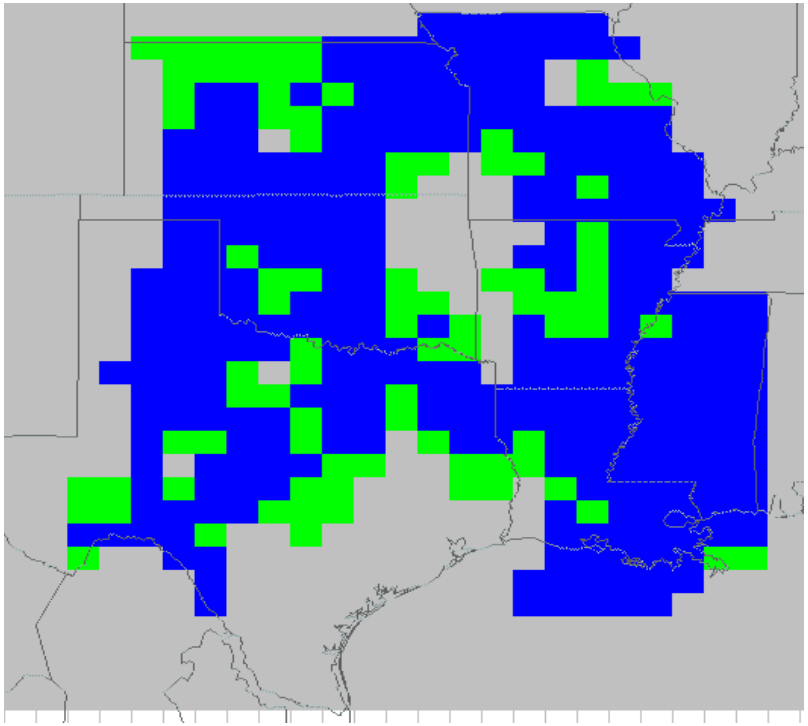
No Significant Bias (.8<bias<1.2)

Under-Forecast (bias< .8)

Insufficient Data

TSTMS 48 Hr Forecast

HEIDKE SKILL SCORE



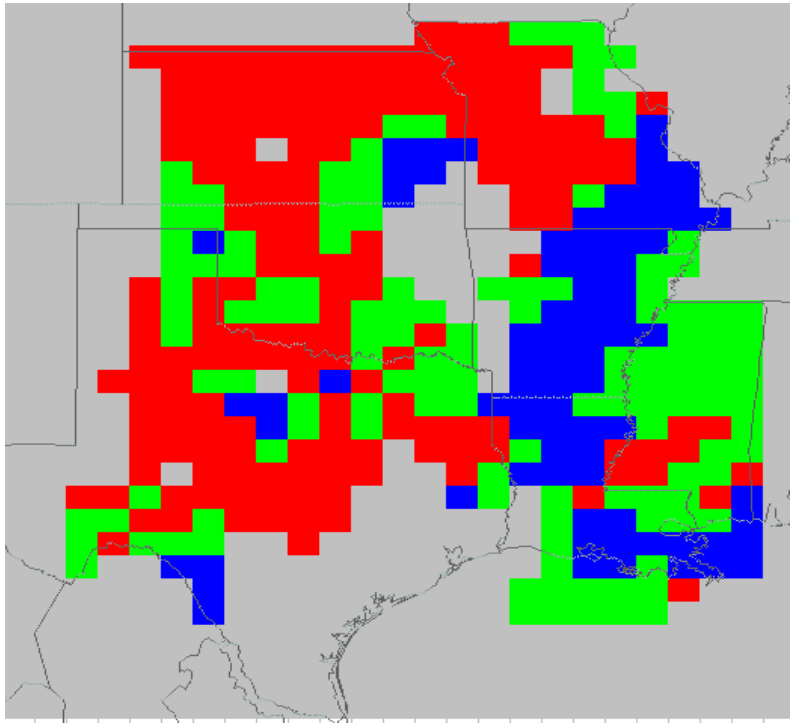
Strong Skill (hss>.5)

Weak to Moderate Skill (0<hss<.5)

No Skill (hss< 0)

Insufficient Data

BIAS



Over-Forecast (bias>1.2)

No Significant Bias (.8<bias<1.2)

Under-Forecast (bias< .8)

Insufficient Data

Review

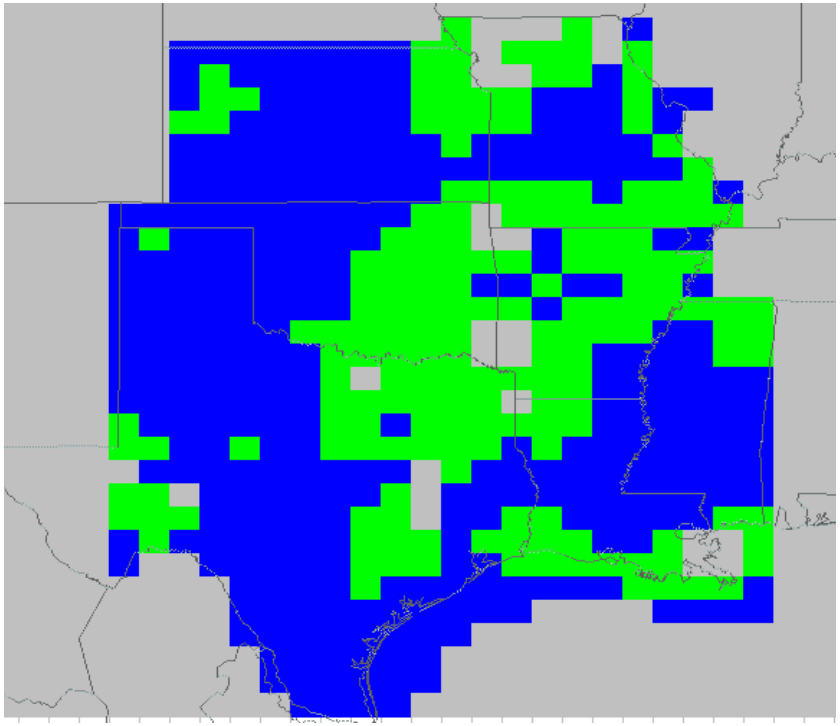
- HWD Strong to moderate skill overall
  - Under forecasting still the trend
- TSTMS Strong to moderate skill overall
  - Slight tendency toward under forecasting

Graphics Trends

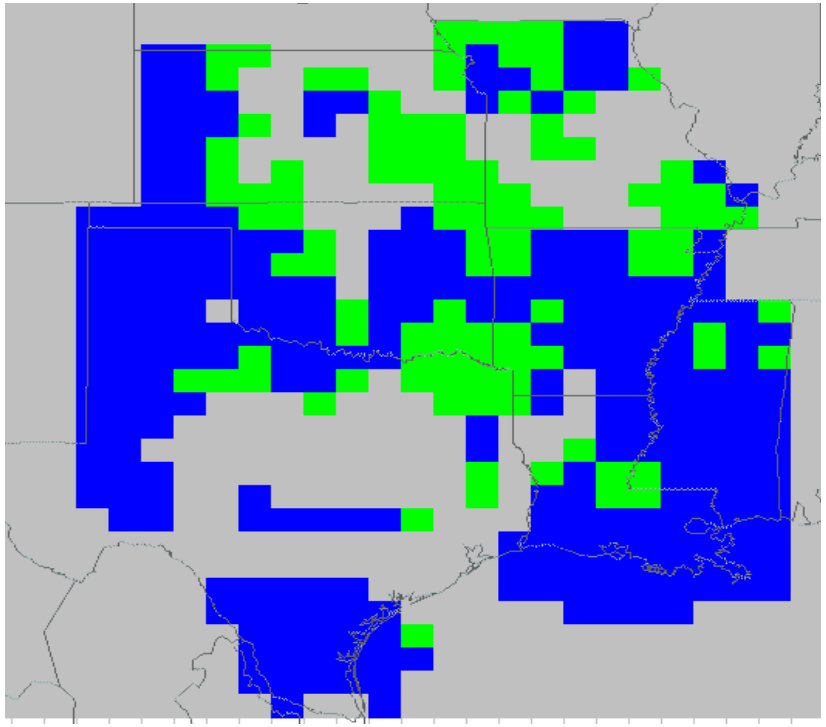
HEIDKE SKILL SCORE

HWD 12HR

March



April



Opportunities (Days with an occurrence)

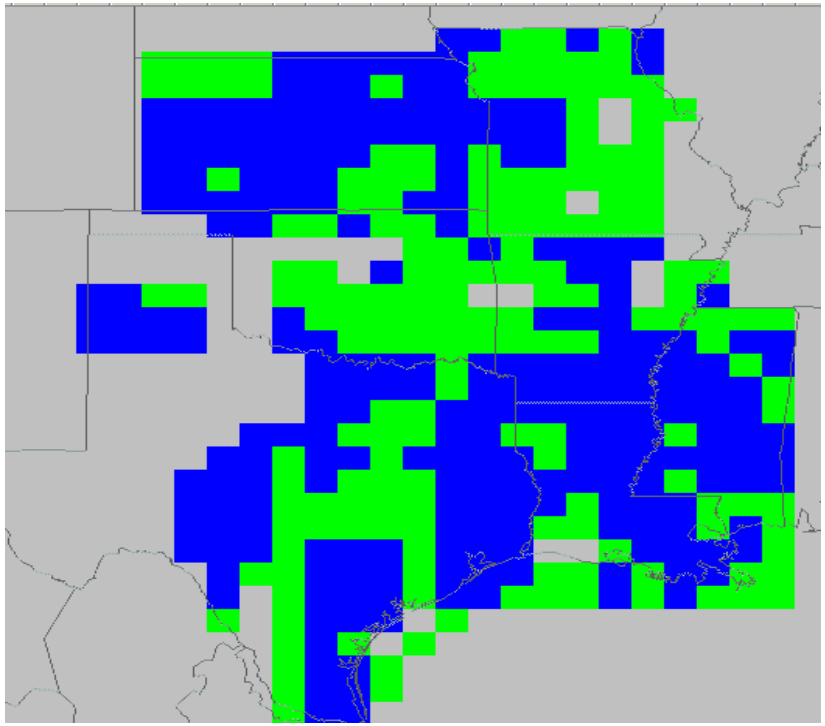
29

28

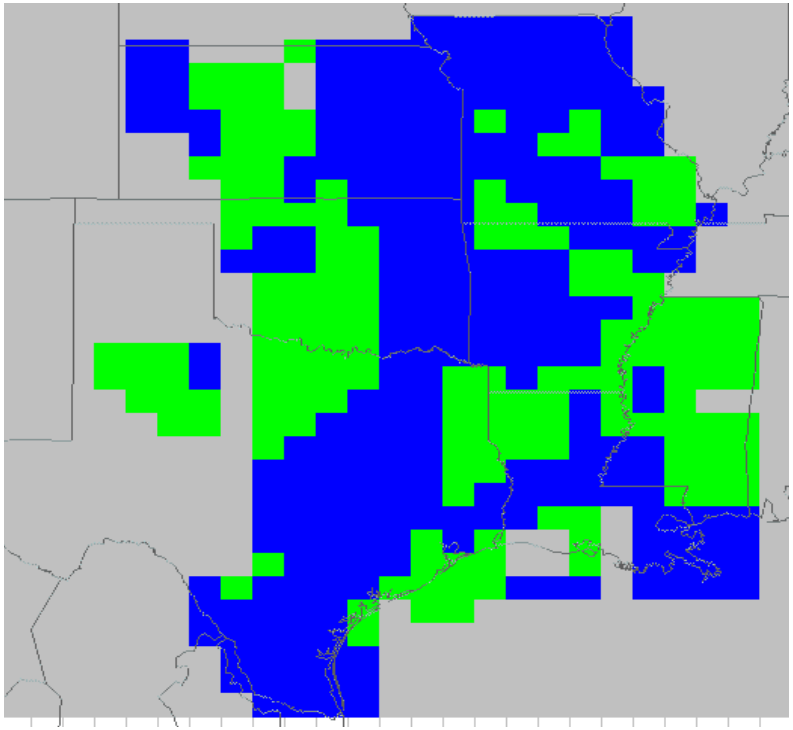
HEIDKE SKILL SCORE

HWD 24 HR

March



April



Opportunities (Days with an occurrence)

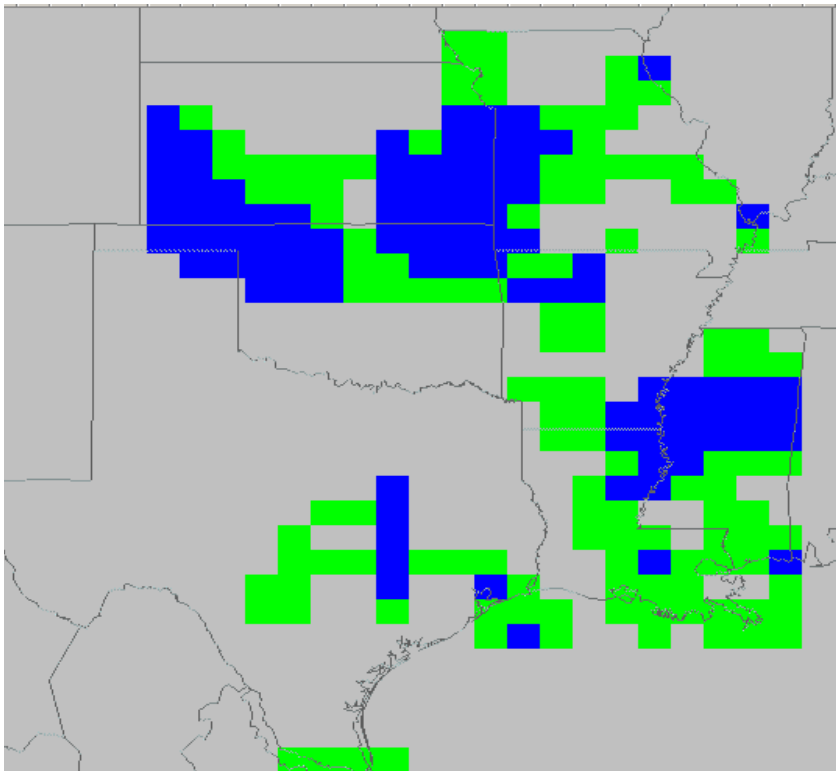
21

17

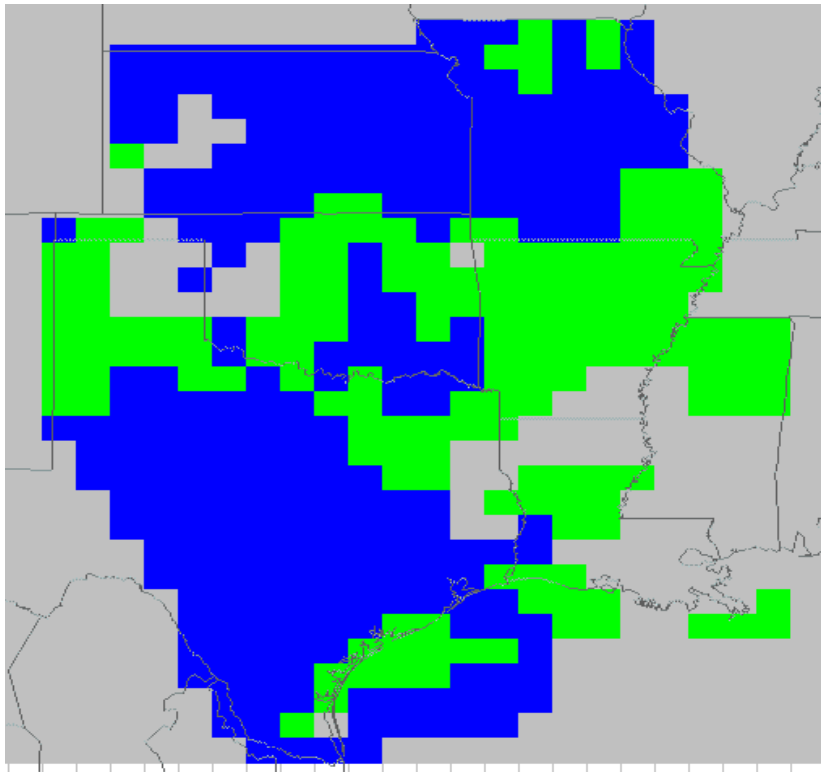
HEIDKE SKILL SCORE

HWD 48 HR

March



April



Opportunities (Days with an occurrence)

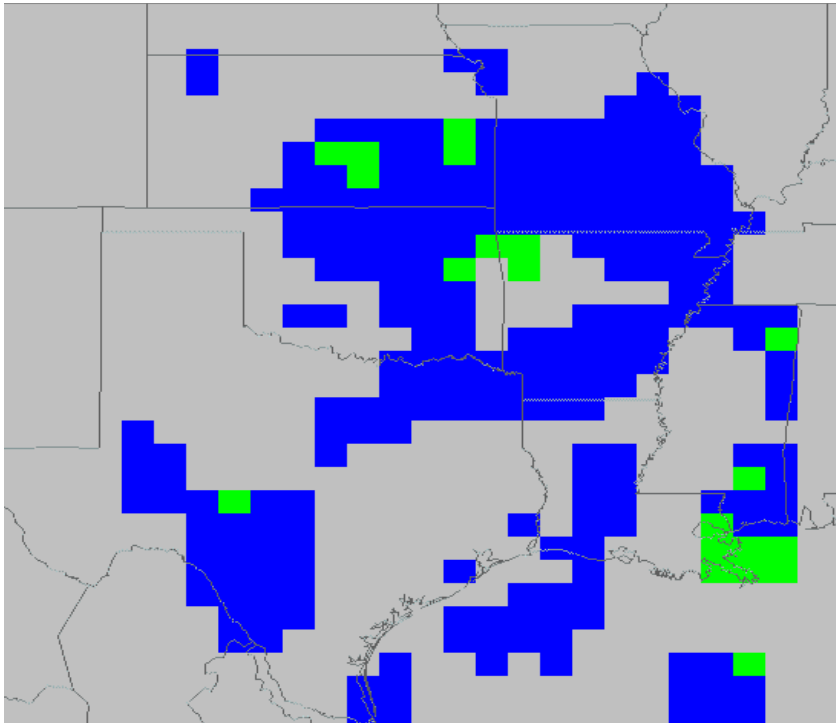
22

16

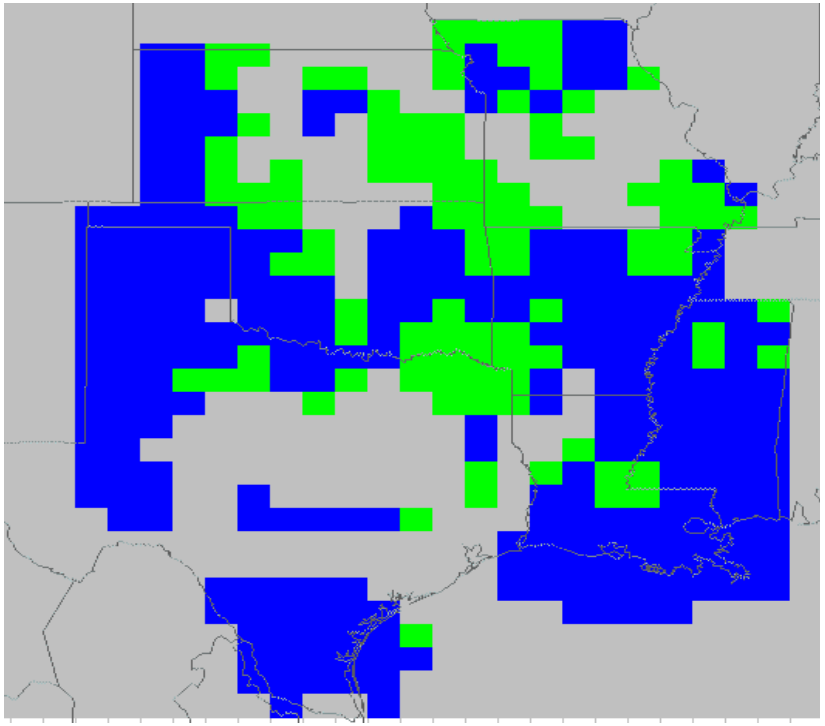
HEIDKE SKILL SCORE

TSTMS 12 HR

March



April



Opportunities (Days with an occurrence)

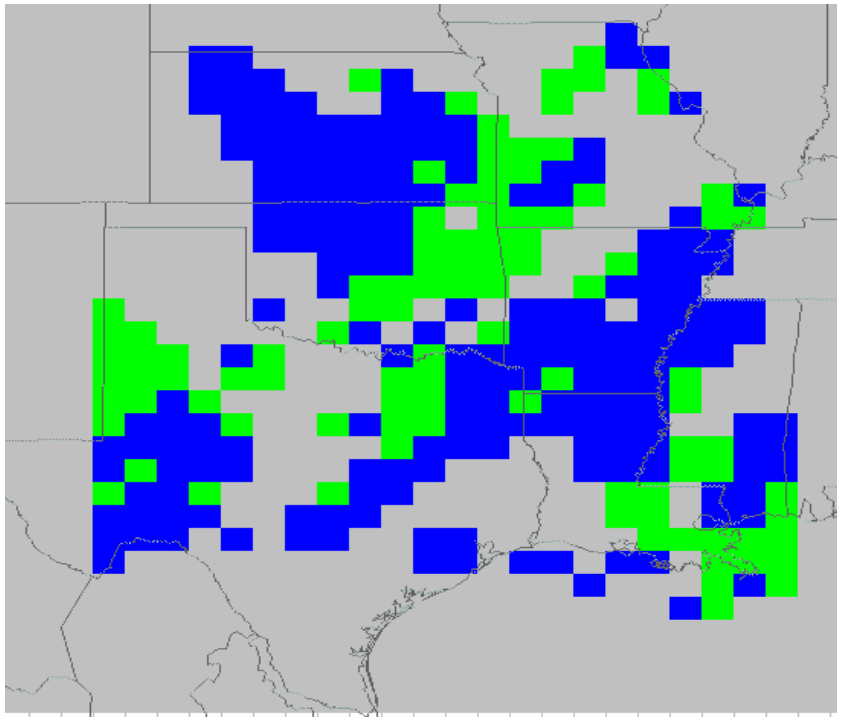
16

20

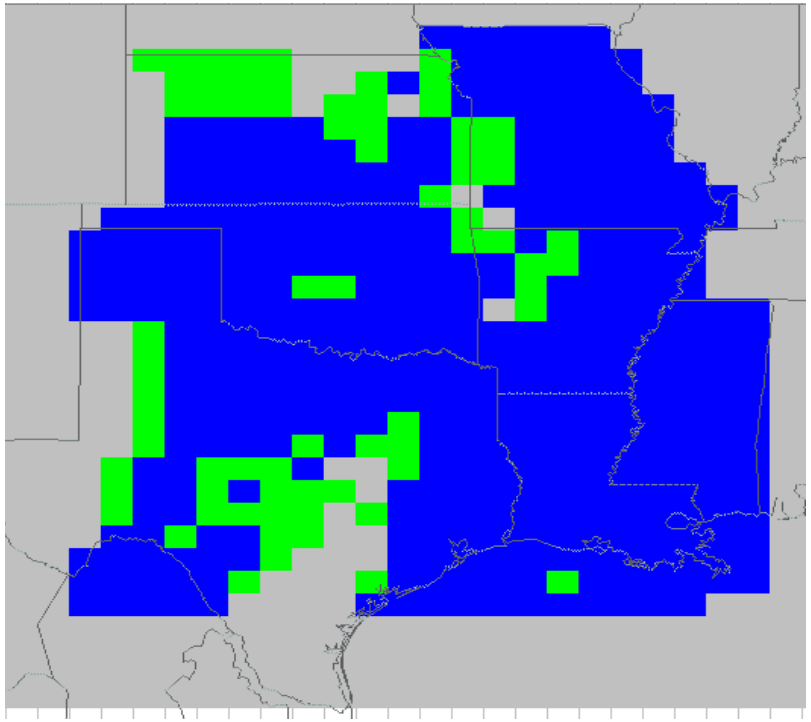
HEIDKE SKILL SCORE

TSTMS 24 HR

March



April



Opportunities (Days with an occurrence)

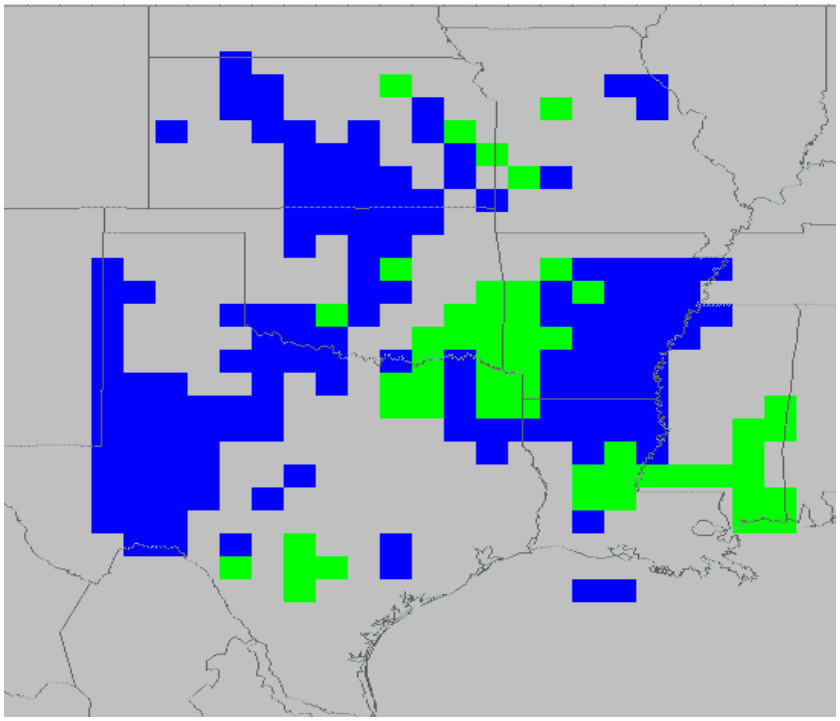
18

22

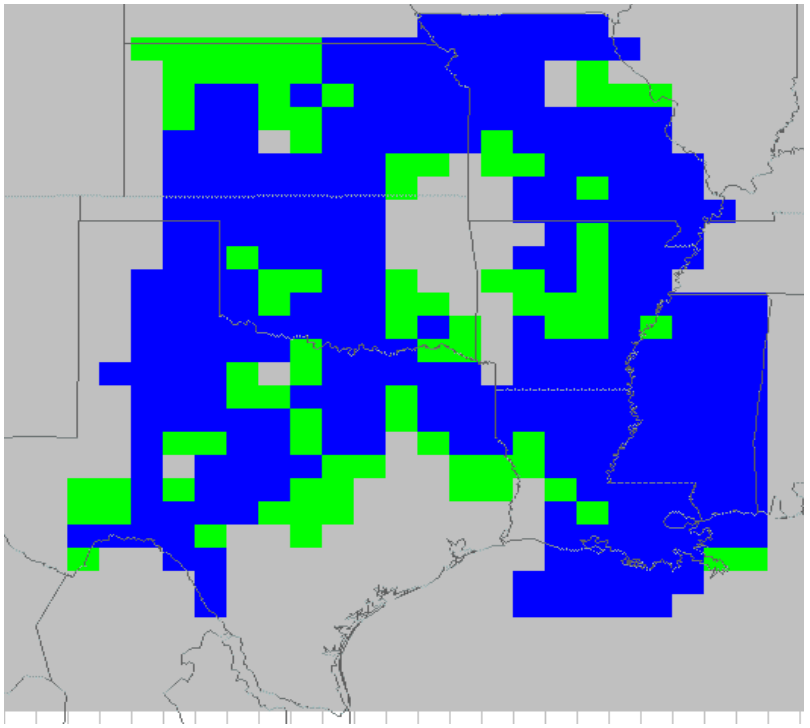
HEIDKE SKILL SCORE

TSTMS 48 HR

March



April



Opportunities (Days with an occurrence)